

Appln. No. 10/644,563

Amendment dated March 22, 2006

Reply to Office Action dated September 22, 2005

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of the claims in this application:

**Listing of Claims:**

1. (Currently Amended) A resonator assembly comprising:

a turbine engine component having a plurality of opening therein;

a resonator body including a plate having a plurality of openings therein and at least one side wall extending from and about the entire periphery of the plate, the at least one side wall being attached to the turbine engine component such that the resonator body encloses at least some of the plurality of openings in the turbine engine component, wherein a cavity is defined between the turbine engine component and the resonator body; and

a scoop including a top plate and at least one side wall extending substantially perpendicularly therefrom, the at least one side wall of the scoop attached to the resonator body such that the scoop is disposed above the resonator and such that the top plate substantially overhangs the plate;

wherein the scoop includes one side without a side wall so as to provide an opening into a space defined between the scoop and the resonator plate;

whereby the scoop captures a passing fluid so as to substantially equalize the pressure impinging on the resonator plate.

2. (Original) The resonator assembly of claim 1 wherein the at least one side wall of the resonator extends substantially perpendicularly from the resonator plate.

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3. (Original) The resonator assembly of claim 1 wherein the at least one side wall of the scoop is attached to the resonator by one of welding or brazing.
4. (Original) The resonator assembly of claim 1 wherein the top plate of the scoop and the resonator plate are spaced substantially equidistant.
5. (Withdrawn) The resonator assembly of claim 1 wherein the top plate of the scoop and the resonator plate are curved.
6. (Original) The resonator assembly of claim 1 wherein the spacing between the top plate of the scoop and the resonator plate is from about 1 millimeter to about 2 millimeters.
7. (Withdrawn) The resonator assembly of claim 1 wherein the resonator plate includes front and rear ends, the front and rear ends being disposed at different elevations.
8. (Withdrawn) The resonator assembly of claim 7 wherein the difference in elevation between the front and rear ends is from about 1 millimeter to about 3 millimeters.
9. (Withdrawn) The resonator assembly of claim 7 wherein the rear end of the resonator plate is disposed higher than the front end.
10. (Withdrawn) The resonator assembly of claim 7 wherein one side of the top plate of the scoop is attached to the rear end of the resonator plate such that the opening is at the front end.
11. (Original) The resonator assembly of claim 1 wherein the resonator and scoop include an axial length and a circumferential length, wherein the axial length is greater than the circumferential length.
12. (Original) The resonator assembly of claim 1 wherein the resonator and scoop include an axial length and a circumferential length, wherein the circumferential length is greater than the axial length.

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13. (Original) The resonator assembly of claim 1 wherein the top plate of the scoop includes at least one opening.

14. (Withdrawn) A resonator assembly comprising:

a resonator including a plate having a plurality of openings therein and at least one side wall extending from the periphery of the plate; and

a box attached on top of the resonator, the box having a top plate and at least one side wall extending from the entire periphery of the top plate, wherein the top plate includes a plurality of openings;

wherein a plenum is defined between the box and the resonator plate, the plenum having a volume;

whereby a fluid entering the plurality of openings in the top plate of the box is substantially equalized in the plenum prior to impinging on the resonator plate.

15. (Withdrawn) The resonator assembly of claim 14 wherein the at least one side wall of the box extends substantially perpendicular away from the top plate.

16. (Withdrawn) The resonator assembly of claim 14 wherein the top plate of the box and the resonator plate are substantially identical.

17. (Withdrawn) The resonator assembly of claim 14 wherein the top plate of the box and the resonator plate are substantially equidistant.

18. (Withdrawn) The resonator assembly of claim 14 wherein the side walls of the resonator are attached to a turbine engine component so as to define a volume between the component and the resonator.

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19. (Withdrawn) The resonator assembly of claim 18 wherein the plenum volume is less than the resonator volume.

20. (Withdrawn) The resonator assembly of claim 14 wherein the height of the box is from about 1/4 to about 2/5 the height of the resonator.

21. (New) A resonator assembly comprising:

a turbine engine component having an outer peripheral surface, an inner peripheral surface, and a plurality of passages extending through the component from the inner peripheral surface to the outer peripheral surface,

a resonator body including a substantially rectangular plate having a periphery, a plurality of openings extending through the plate, the body further including a side wall extending substantially perpendicularly away from and about the entire periphery of the top plate, wherein the side wall of the resonator body is attached to the outer peripheral surface of the component so as to enclose at least some of the plurality of passages, wherein a cavity is defined between the outer peripheral surface of the component and the resonator body; and

a scoop including a substantially rectangular top plate having a periphery and a side wall extending substantially perpendicularly away from and about the top plate, wherein one side of the periphery of top plate does not have a side wall extending therefrom so that there is an opening into a space defined between the scoop and the resonator plate, wherein the side wall of the scoop is attached to the resonator body such that the scoop top plate substantially overhangs the resonator top plate resonator, wherein the space and the cavity are in fluid communication by way of the plurality of openings in the plate of the resonator body,

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whereby the scoop captures a passing fluid so as to substantially equalize the pressure impinging on the resonator plate.

22. (New) The resonator assembly of claim 21 wherein the scoop top plate and the resonator plate are spaced substantially equidistant.

23. (New) The resonator assembly of claim 21 wherein the scoop top plate and the resonator plate are circumferentially curved.

24. (New) The resonator assembly of claim 21 wherein the spacing between the scoop top plate and the resonator plate is from about 1 millimeter to about 2 millimeters.

25. (New) The resonator assembly of claim 21 wherein the scoop top plate includes at least one opening.

26. (New) The resonator of claim 21 wherein the turbine engine component is a combustor component.

27. (New) The resonator of claim 21 wherein the turbine engine component is substantially circular.